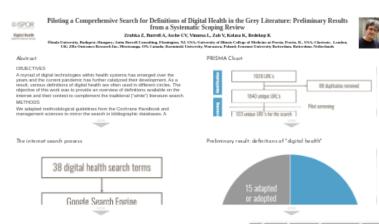
Piloting a Comprehensive Search for Definitions of Digital Health in the Grey Literature:

Preliminary Results from a Systematic Scoping Review



Zrubka Z, Burrell A, Asche CV, Vinuesa L, Zah V, Kolasa K, Redekop K

Óbuda University, Budapest, Hungary; Anita Burrell Consulting, Flemington, NJ, USA; University of Illinois College of Medicine at Peoria, Peoria, IL, USA; Clarivate, London, UK; ZRx Outcomes Research Inc, Mississauga, ON, Canada; Kozminski University, Warszawa, Poland; Erasmus University Rotterdam, Rotterdam, Netherlands



Virtual ISPOR Europe 2020



16-19 November

OBJECTIVES

ABSTRACT

A myriad of digital technologies within health systems has emerged over the

years and the current pandemic has further catalyzed their development. As a result, various definitions of digital health are often used in different circles. The objective of this work was to provide an overview of definitions available on the internet and their context to complement the traditional ("white") literature search. **METHODS**

comprehensive Google search was performed to retrieve uniform resource locators (URL's) of webpages containing terms for digital health within 4 words of synonyms for the word "definition". The DataScraper extension of the Google Chrome browser was used to collect all URL's. A preliminary analysis of the definitions for "digital health" was performed. Webpages were eligible if they contained an original or adopted English-language definition of digital health or contained a direct link to a definition or a document containing a definition. All document types were eligible. RESULT

yielded no results and 32 yielded a total of 1928 URL's. Deduplication resulted

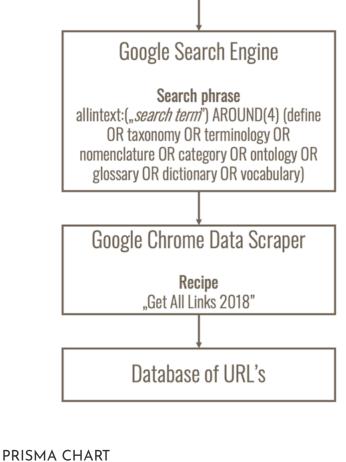
17 (16.5%) contained definitions of terms related to digital health. The retrieved webpages contained 22 (21.4%) original definitions and 15 (14.6%) adopted or adapted definitions. CONCLUSIONS The digital era raises both challenges and opportunities in conducting a grey literature search. We found that an augmented Google-based search can identify valuable references that traditional literature searches cannot detect. Term

REFERENCES Adams, R.J., Smart, P. and Huff, A.S. (2017), Shades of Grev: Guidelines for Working with the Grey Literature in Systematic Reviews for Management and Organizational Studies. International Journal of Management Reviews, 19: 432-454. doi:10.1111/ijmr.12102

Moher, D., A. Liberati, J. Tetzlaff, D. G. Altman, and Prisma Group. "Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The Prisma Statement." BMJ 339 (Jul 21 2009): b2535.

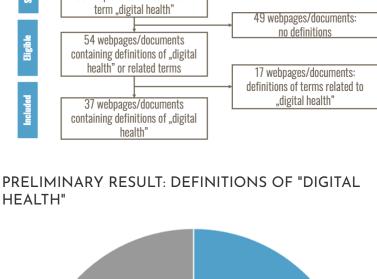
38 digital health search terms

THE INTERNET SEARCH PROCESS



1840 unique URL's 103 unique URL's for the search

1928 URL's

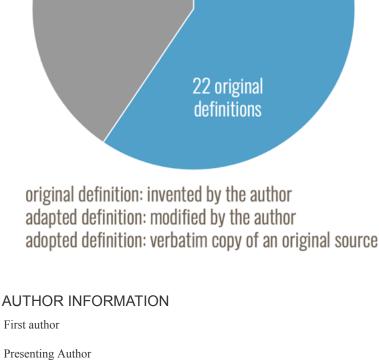


88 duplicates removed

Pilot screening

or adopted definitions

15 adapted



Bécsi út 96/b Budapest, PE, 1093 Hungary Phone Number: +36302029415 Email Address: zsombor.zrubka@uni-corvinus.hu

University Research, Innovation and Service Center

26 Plennert Road Flemington, NJ, 08822 USA Phone Number: (908) 316-1091 Email Address: burrell.anita@yahoo.com Third author

Professor of Medicine, Director Center for Outcomes Research

Phone Number: 309-671-8461

Oncology Market Assessment

Phone Number: +44 7913992074

* Membership Number 33417

Email Address: Laura. Vinuesa@Clarivate.com

London, LON, E3 3NU United Kingdom

Zsombor Zrubka, MD, MBA, PhD

* Membership Number 39568

Anita Burrell, MA, MBA

Anita Burrell Consulting

Carl V. Asche, PhD

One Illini Dr Peoria, IL, 61605

USA

Clarivate

Assistant Professor

Óbuda University

Second author

Principal

Email Address: cva@uic.edu Laura Vinuesa, D.V.M., MSc Senior Business Insights Analyst

University of Illinois College of Medicine at Peoria

Fifth author Vlad Zah, MS, MBA, PhD

CEO ZRx Outcomes Research Inc Mississauga, ON, L5A2X7 Canada Phone Number: +14169534427 Email Address: vzah@outcomesresearch.ca

* Membership Number 231890

Professor of Health Economics, Head of Department Health Economics and Healthcare Management

Kozminski University Jagiellońska 57/59 Warszawa, 03-301 Poland Phone Number: 48781881007

Fax Number: 48781881007

Katarzyna Kolasa, PhD

Sixth author

Email Address: kkolasa@kozminski.edu.pl Seventh author Ken Redekop, PhD Associate Professor Erasmus School of Health Policy & Management, Institute of Medical Technology Assessment (iMTA) Erasmus University Rotterdam Burg Oudlaan 50 Rotterdam, 3062 PA

Email Address: redekop@eshpm.eur.nl * Membership Number 10768

OBJECTIVES: A myriad of digital technologies within health systems has

emerged over the years and the current pandemic has further catalyzed their development. As a result, various definitions of digital health are often used in different circles. The objective of this work was to provide an overview of definitions available on the internet and their context to complement the traditional ("white") literature search.METHODS: We adapted methodological guidelines from the Cochrane Handbook and management sciences to mirror the search in bibliographic databases. A comprehensive Google search was performed to retrieve uniform resource locators (URL's) of webpages containing terms for digital health within 4 words of synonyms for the word "definition". The DataScraper extension of the Google Chrome browser was used to collect all URL's. A preliminary analysis of the definitions for "digital health" was performed. Webpages were eligible if they contained an original or adopted English-language definition of digital health or contained a direct link to a definition or a document containing a definition. All document types were eligible.RESULTS: Of the 38 search expressions built from terms related to digital health, 6 yielded no results and 32 yielded a total of 1928 URL's. Deduplication resulted in 1840 unique URL's. The expression containing "digital health" yielded 103 webpages, out of which 37 (35.9%) contained a definition of digital health, and 17 (16.5%) contained definitions of terms related to digital health. The retrieved webpages contained 22 (21.4%) original definitions and 15 (14.6%) adopted or adapted definitions. CONCLUSIONS: The digital era raises both challenges and opportunities in conducting a grey literature search. We found that an augmented Google-based search can identify raluable references that traditional literature searches cannot detect. Term definitions (and their context) found in the grey versus bibliographic databases need to be compared to ensure their alignment with ISPOR's mission.

Adams, R.J., Smart, P. and Huff, A.S. (2017), Shades of Grey: Guidelines for Working with the Grey Literature in Systematic Reviews for Management and Organizational Studies. International Journal of Management Reviews, 19: 432-454. doi:10.1111/ijmr.12102 Higgins JPT, Thomas J, Chandler J, Cumpston M, Li T, Page MJ, Welch VA (editors). Cochrane Handbook for Systematic Reviews of Interventions version

6.0 (updated July 2019). Cochrane, 2019. Available from www.training.cochrane.org/handbook.

Moher, D., A. Liberati, J. Tetzlaff, D. G. Altman, and Prisma Group. "Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The Prisma Statement." BMJ 339 (Jul 21 2009): b2535.

We adapted methodological guidelines from the Cochrane Handbook and management sciences to mirror the search in bibliographic databases. A

Of the 38 search expressions built from terms related to digital health, 6 in 1840 unique URL's. The expression containing "digital health" yielded 103 webpages, out of which 37 (35.9%) contained a definition of digital health, and

definitions (and their context) found in the grey versus bibliographic databases need to be compared to ensure their alignment with ISPOR's mission.

Higgins JPT, Thomas J, Chandler J, Cumpston M, Li T, Page MJ, Welch VA (editors). Cochrane Handbook for Systematic Reviews of Interventions version 6.0 (updated July 2019). Cochrane, 2019. Available from www.training.cochrane.org/handbook.

Netherlands Phone Number: +31 10 4088535 **ABSTRACT**

REFERENCES